

TABLE OF CONTENTS

No. 1 January–February 1995

Issued 14 March 1995

Presidential Address

- 1–17 There's more to a mushroom than meets the eye: Mating studies in the Agaricales
R. H. Petersen

Cell Biology/Ultrastructure

- 18–24 Septal pore apparatus of the smut *Ustilicystis waldsteiniae*
R. Bauer, K. Mendgen, and F. Oberwinkler
- 25–33 Morphology and zoospore ultrastructure of *Entophlyctis luteolus* sp. nov. (Chytridiales): Implications for chytrid taxonomy
J. E. Longcore
- 34–40 Oak-leaf-litter rhizomorphs from Iowa and Texas: Calcium oxalate producers
H. T. Horner, L. H. Tiffany, and G. Knaphus
- 41–45 *Discothylaria myrmecophila* and its *Hypocreodendron* anamorph
J. D. Rogers, Y.-M. Ju, and F. San Martín Gonzalez

Development/Morphology

- 46–53 Primary tissue and the structure of the podetium in *Cladonia*
S. Hammer

Ecology

- 54–60 Inland sand dune mycorrhizae: Effects of soil depth, moisture, and pH on colonization of *Oryzopsis hymenoides*
A. K. Al-Agely and F. B. Reeves

Genetics

- 61–67 Separation of *Tilletia indica* chromosomes using CHEF gel electrophoresis
P. W. Tooley, M. M. Carras, R. Beck, G. Peterson, and M. R. Bonde
- 68–71 A single mating population of *Gibberella fujikuroi* (*Fusarium proliferatum*) predominates in asparagus fields in Connecticut, Massachusetts, and Michigan
W. H. Elmer

Molecular Evolution

- 72–83 Assessment of *Phialophora* species based on ribosomal DNA internal transcribed spacers and morphology
Z. H. Yan, S. O. Rogers, and C. J. K. Wang

Pathology

- 84–86 Ascospore dispersal of *Ceratocystiopsis ranaculosus*, a mycangial fungus of the southern pine beetle
J. C. Moser, T. J. Perry, J. R. Bridges, and H.-F. Yin
- 87–89 Dynamics of oval and falcate conidium production of *Colletotrichum graminicola* from sorghum
M. D. Thomas and R. A. Frederiksen

Systematics

- 90–95 Western American Pezizales. *Selenaspora guernisacii*, new to North America
N. S. Weber
- 96–120 Contribution to the study of the Tulostomataceae in Baja California, Mexico. I
G. Moreno, A. Altés, C. Ochoa, and J. E. Wright

TABLE OF CONTENTS

No. 1 January–February 1995

Issued 14 March 1995

Presidential Address

- 1–17 There's more to a mushroom than meets the eye: Mating studies in the Agaricales
R. H. Petersen

Cell Biology/Ultrastructure

- 18–24 Septal pore apparatus of the smut *Ustilicystis waldsteiniae*
R. Bauer, K. Mendgen, and F. Oberwinkler
- 25–33 Morphology and zoospore ultrastructure of *Entophlyctis luteolus* sp. nov. (Chytridiales): Implications for chytrid taxonomy
J. E. Longcore
- 34–40 Oak-leaf-litter rhizomorphs from Iowa and Texas: Calcium oxalate producers
H. T. Horner, L. H. Tiffany, and G. Knaphus
- 41–45 *Discoxylaria myrmecophila* and its *Hypocreodendron* anamorph
J. D. Rogers, Y.-M. Ju, and F. San Martín Gonzalez

Development/Morphology

- 46–53 Primary tissue and the structure of the podetium in *Cladonia*
S. Hammer

Ecology

- 54–60 Inland sand dune mycorrhizae: Effects of soil depth, moisture, and pH on colonization of *Oryzopsis hymenoides*
A. K. Al-Agely and F. B. Reeves

Genetics

- 61–67 Separation of *Tilletia indica* chromosomes using CHEF gel electrophoresis
P. W. Tooley, M. M. Carras, R. Beck, G. Peterson, and M. R. Bonde
- 68–71 A single mating population of *Gibberella fujikuroi* (*Fusarium proliferatum*) predominates in asparagus fields in Connecticut, Massachusetts, and Michigan
W. H. Elmer

Molecular Evolution

- 72–83 Assessment of *Phialophora* species based on ribosomal DNA internal transcribed spacers and morphology
Z. H. Yan, S. O. Rogers, and C. J. K. Wang

Pathology

- 84–86 Ascospore dispersal of *Ceratocystiopsis ranaculosus*, a mycangial fungus of the southern pine beetle
J. C. Moser, T. J. Perry, J. R. Bridges, and H.-F. Yin
- 87–89 Dynamics of oval and falcate conidium production of *Colletotrichum graminicola* from sorghum
M. D. Thomas and R. A. Frederiksen

Systematics

- 90–95 Western American Pezizales. *Selenaspora guernisacii*, new to North America
N. S. Weber
- 96–120 Contribution to the study of the Tulostomataceae in Baja California, Mexico. I
G. Moreno, A. Altés, C. Ochoa, and J. E. Wright

- 121-126 *Mycosphaerella gracilis* and other species of *Mycosphaerella* associated with leaf spots of *Eucalyptus* in Indonesia
P. W. Crous and A. C. Alfenas
- 127-137 Taxonomic and phylogenetic divergence among five *Scutellospora* species based on comparative developmental sequences
J. B. Morton

New Techniques

- 138-139 A simple technique for studying the development of *Erysiphe pisi* in the epidermis of *Pisum sativum*
B. Prithiviraj and U. P. Singh
- 140-143 Design of polymerase chain reaction primers for amplifying nuclear ribosomal DNA from slime molds
S. A. Rusk, F. W. Spiegel, and S. B. Lee

Memorial

- 144-147 Rolf Singer, 1906-1994
G. M. Mueller

Instructions to Authors

148-152

No. 2 March-April 1995

Issued 3 May 1995

Cell Biology/Ultrastructure

- 153-160 Morphometry and stereology of the conversion of thin-walled yeasts to phase I yeast cells of *Wangiella dermatitidis*
A. S. Kester and D. C. Garrett
- 161-171 Further evidence for host-specific variants in *Zygorhizidium planktonicum*
M. S. Doggett and D. Porter

Development/Morphology

- 172-181 Endophyte-host associations in grasses. XXI. Studies on the structure and development of *Balansia obtecta*
J. F. White, Jr., L. T. Sharp, T. I. Martin, and A. E. Glenn

Ecology

- 182-189 Mutualistic transfer of *Epichloë* spermatia by *Phorbia* flies
T. L. Bultman, J. F. White, Jr., T. I. Bowdish, A. M. Welch, and J. Johnston
- 190-195 A year-round comparison of fungal spores in indoor and outdoor air
D.-W. Li and B. Kendrick
- 196-202 Incidence and compatibility of nonclavicipitaceous fungal endophytes in *Festuca* and *Lolium* grass species
M. R. Siegel, C. L. Schardl, and T. D. Phillips

Molecular Evolution

- 203-209 Phylogenetic divergence of the entomophthoralean fungi: Evidence from nuclear 18S ribosomal RNA gene sequences
T. Nagahama, H. Sato, M. Shimazu, and J. Sugiyama
- 210-222 Is *Penicillium* monophyletic? An evaluation of phylogeny in the family Trichocomaceae from 18S, 5.8S and ITS ribosomal DNA sequence data
M. L. Berbee, A. Yoshimura, J. Sugiyama, and J. W. Taylor
- 223-238 Phylogenetic relationships in *Ganoderma* inferred from the internal transcribed spacers and 25S ribosomal DNA sequences
J.-M. Moncalvo, H.-H. Wang, and R.-S. Hseu

Physiology/Biochemistry

- 239-244 Shiitake cultivation: Gas phase during incubation influences productivity
J. D. Donoghue and W. C. Denison

Systematics

- 245-252 The anamorph of *Chaenothecopsis debilis*
L. Tibell
- 253-264 Observations on Thamnidiaceae. VII. *Helicostylum* and a new genus *Kirkia*
G. L. Benny
- 265-270 *Tychosporium acutostipes*, a new protostelid which modifies the concept of the Protosteliidae
F. W. Spiegel, D. L. Moore, and J. Feldman
- 271-272 Notes on conidial fungi. I. A new species of *Corynespora*
R. F. Castañeda Ruiz, J. Guarro, and J. Cano

New Techniques

- 273-279 Estimating the viability of vesicular-arbuscular mycorrhizae fungal spores using tetrazolium salts as vital stains
F. L. Walley and J. J. Germida
- 280-288 A PCR-based identification method for species of *Armillaria*
T. C. Harrington and B. D. Wingfield

No. 3 May-June 1995

Issued 6 July 1995

Cell Biology/Ultrastructure

- 289-297 A study of the fungal endophyte *Acremonium coenophialum* in the roots of tall fescue seedlings
M. D. Azevedo and R. E. Welty
- 298-303 Conidium development in the *Hyalorhinochlamydia* anamorph of *Ophiostoma ips*
E. Benade, M. J. Wingfield, and P. S. Van Wyk
- 304-318 Zygosporogenesis in *Zygorhynchus heterogamus*, with a proposal for standardization of structural nomenclature
R. E. Edelfmann and K. L. Klomparens

Ecology

- 319-323 Fungal endophytes of *Dryas octopetala* from a high arctic polar semidesert and from the Swiss Alps
P. J. Fisher, F. Graf, L. E. Petrini, B. C. Sutton, and P. A. Wookey

Genetics

- 324-332 Vegetative compatibility within populations of *Aspergillus flavus*, *A. parasiticus*, and *A. tamarii* from a peanut field
B. W. Horn and R. L. Greene
- 333-353 Electrophoretic karyotype polymorphisms in the genus *Pythium*
F. N. Martin

Pathology

- 354-359 *Metarhizium anisopliae*, a fungal pathogen of *Reticulitermes flavipes* (Isoptera: Rhinotermitidae)
M. H. Zoberi

Physiology/Biochemistry

- 360-361 Selective suppression of the mitogenic response of murine lymphocytes by suillin from *Suillus bovinus*
K. Shirata, T. Kato, and M. Niwano

- 362-365 Some factors affecting the germination of *Thermoascus aurantiacus* ascospores
J. J. Deploey
- 366-369 Cobalt chloride and ethylene affect fruiting of *Agaricus bisporus*
R. H. Kurtzman, Jr.
- 370-374 Effect of melanin biosynthesis inhibiting compounds on *Gaeumannomyces* species
M. L. Elliott

Systematics

- 375-396 Coprophilous fungi in New Zealand. I. *Podospora* species with swollen agglutinated perithecial hairs
A. Bell and D. P. Mahoney
- 397-406 *Plectosporium*, a new genus for *Fusarium tabacinum*, the anamorph of *Plectosphaerella cucumerina*
M. E. Palm, W. Gams, and H. I. Nirenberg
- 407-413 *Escovopsis aspergilloides*, a rediscovered hyphomycete from leaf-cutting ant nests
K. A. Seifert, R. A. Samson, and I. H. Chapela

New Techniques

- 414-418 A new technique for sampling protostelids
D. Moore and F. W. Spiegel
- 419-423 Direct observation of spores of vesicular-arbuscular mycorrhizal fungi growing on sugar maple roots in the field, using sodium hexametaphosphate as a soil dispersant
P. Moutoglou, J. Klironomos, P. Widden, and B. Kendrick

Book Reviews

- 424-430

No. 4 July-August 1995

Issued 16 August 1995

Cell Biology/Ultrastructure

- 431-441 Purification and characterization of a virus-like particle of *Leucostoma persoonii*
C. J. P. Jensen, R. F. Allison, and G. C. Adams

Development/Morphology

- 442-450 Hyphal morphology associated with strain instability in the commercial mushroom, *Agaricus bisporus*
M. C. Heath, A. Li, P. A. Horgen, and P. L. Tam

Ecology

- 451-453 Mycorrhizal status of *Deschampsia antarctica* in the Palmer Station area, Antarctica
B. G. DeMars and R. E. J. Boerner
- 454-458 Dispersal of soredia by the oribatid mite, *Humerobates arborea*
C. S. Stubbs
- 459-466 Fungal biomass in decayed wood
H. L. Jones and J. J. Worrall
- 467-470 The ability of known ericoid mycorrhizal fungi to form mycorrhizae with *Gaultheria shallon*
G. XIAO AND S. M. BERCH

Genetics

- 471-482 Isozyme detection and variation in *Leucostoma* species from *Prunus* and *Malus*
R. S. Surve-Iyer, G. C. Adams, A. F. Iezzoni, and A. L. Jones

Pathology

- 483-489 Instability in pathogenicity of *Entomophaga maimaiga* after long-term cryopreservation
A. E. Hajek, M. Shimazu, and R. A. Humber
- 490-500 DNA amplification fingerprinting provides evidence that *Discula destructiva*, the cause of dogwood anthracnose in North America, is an introduced pathogen
R. N. Trigiano, G. Caetano-Anollés, B. J. Bassam, and M. T. Windham
- 501-506 Fungi associated with purple loosestrife (*Lythrum salicaria*) in Minnesota
R. F. Nyvall
- 507-509 An unusual strain of *Fusarium lateritium* affecting sweetpotato
P. E. Nelson, J. H. Juba, and C. A. Clark

Physiology/Biochemistry

- 510-517 Catabolism of 6-methoxy-benzoxazolinone and 2-benzoxazolinone by *Fusarium moniliforme*
M. D. Richardson and C. W. Bacon

Systematics

- 518-524 *Wojnowicia colluvium* sp. nov. isolated from conifer litter
D. F. Farr and G. F. Bills
- 525-531 Phylogenetic relatedness within the genus *Erysiphe* estimated with morphological characteristics
K. A. Zeller
- 532-542 Fungi on *Juncus roemerianus*. 4. New marine ascomycetes
J. Kohlmeyer, B. Volkmann-Kohlmeyer, and O. E. Eriksson
- 543-546 Neotypification and emended description of *Fusarium anguioides*
P. E. Nelson, T. A. Toussoun, and W. F. O. Marasas
- 547-550 An unusual psychrophilic aquatic agaric from Argentina
D. E. Desjardin, L. Martínez-Peck, and M. Rajchenberg
- 551-559 *Dictyostelium citrinum*, *D. medusoides* and *D. granulophorum*: three new members of the Dictyosteliaceae from forest soils of Tikal, Guatemala
E. M. Vadell, M. T. Holmes, and J. C. Cavender
- 560-573 Fossil arbuscular mycorrhizae from the Early Devonian
T. N. Taylor, W. Remy, H. Hass, and H. Kerp
- 574-578 Observations on *Rugosopora* Heinemann in the Neotropics
A. E. Franco-Molano

Change in Instructions to Authors

578

No. 5 September-October 1994

Issued 3 November 1995

Cell Biology/Ultrastructure

- 579-581 Nuclear DNA content and chromosome number in German isolates of *Phytophthora infestans*
D. L. Ritch and S. S. Daggett

Development/Morphology

- 582-587 Spore development of *Entrophospora kentinensis* in an aeroponic system
C.-G. Wu, Y.-S. Liu, and L. L. Hung
- 588-591 Development of chlamydospores in *Alternaria alternata*
A. L. Lagopodi and C. C. Thanassouloupoulos

Genetics

- 592-596 Variability among isolates of *Xylaria cubensis* as determined by isozyme analysis and somatic incompatibility tests
K. F. Rodrigues, O. Petrini, and A. Leuchtmann
- 597-603 The mating system of *Phellinus tremulae*
K. I. Mallett and C. L. Myrholm
- 604-617 Sexual dysfunction associated with outcrossing in *Neurospora tetrasperma*, a pseudohomothallic ascomycete
D. J. Jacobson

Molecular Evolution

- 618-638 Phylogenetic diversity in shiitake inferred from nuclear ribosomal DNA sequences
D. S. Hibbett, Y. Fukumasa-Nakai, A. Tsuneda, and M. J. Donoghue

Pathology

- 639-642 *Trichoderma* spp. from roots of fumigated Douglas-fir trees infected with *Phellinus weirii*
E. E. Nelson, W. G. Thies, and M. G. McWilliams
- 643-650 Numerical responses of the nematophagous fungi *Hirsutella rhossiliensis*, *Monacrosporium cionopagum*, and *M. ellipsosporum*
B. A. Jaffee and A. E. Muldoon

Physiology/Biochemistry

- 651-654 Isolation of a melanolytic fungus and its hydrolytic activity on melanin
Y.-T. Liu, S.-H. Lee, and Y.-Y. Liao

Systematics

- 655-677 Classification of anaerobic gut fungi from herbivores with emphasis on rumen fungi from Malaysia
Y. W. Ho and D. J. S. Barr
- 678-683 *Scutellospora hawaiiensis*: A new species of arbuscular mycorrhizal fungus from Hawaii
R. E. Koske and J. N. Gemma
- 684-688 Two *Arthrobotrys* anamorphs from *Orbilbia auricolor*
D. H. Pfister and M. E. Liftik
- 689-696 *Gelatinipulvinella astraeicola* gen. et sp. nov., a fungicolous discomycete and its anamorph
T. Hosoya and Y. Otani
- 697-701 A new generic arrangement for two species formerly described in *Laboulbenia*
S. Santamaria
- 702-706 *Pauahia*, a genus of Meliolineae
S. J. Hughes
- 707-712 Identification of *Armillaria* species from Wisconsin and adjacent areas
M. T. Banik, J. A. Paul, and H. H. Burdsall, Jr.
- 713-718 New and rare fungi from cherry fruits
F. M. Dugan, R. G. Roberts, and R. T. Hanlin
- 719-731 A monograph of the genus *Gigaspora*, incorporating developmental patterns of morphological characters
S. P. Bentivenga and J. B. Morton
- 732-737 *Glomus corymbiforme*, a new species in Glomales from Poland
J. Błaszczowski

New Technique

- 738-741 Vegetative incompatibility and mycelial death of *Cryphonectria parasitica* detected with a pH indicator
W. A. Powell

Memorials

- 742-744 James W. Sinden, 1902-1994
L. C. Schisler
- 745-748 Leland Shanor, 1914-1993
J. W. Kimbrough

No. 6 November-December 1995

Issued 19 January 1996

Cell Biology/Ultrastructure

- 749-758 Spore ontogeny in species of *Sarcoscypha*
L.-T. Li and J. W. Kimbrough
- 759-771 Visualization of the extracellular matrix surrounding pycnidiospores, germings, and appressoria of *Phyllosticta ampellicida*
K. C. Kuo and H. C. Hoch

Ecology

- 772-778 Attraction of germ tubes and germination of spores of the arbuscular mycorrhizal fungus *Gigaspora gigantea* in the presence of roots of maize exposed to different concentrations of phosphorus
S. P. Suriyapperuma and R. E. Koske

Genetics

- 779-786 Myxomycete reproductive systems: additional information
J. Clark
- 787-794 Cloning and assignment of linkage group loci to a karyotypic map of the filamentous fungus *Aspergillus flavus*
K. R. Foutz, C. P. Woloshuk, and G. A. Payne
- 795-804 Cytology and genetics of sexual incompatibility in *Didymella rabiei*
A. D. Wilson and W. J. Kaiser
- 805-820 Sexuality and somatic incompatibility in *Phellinus gilvus*
D. M. Rizzo, R. M. Rentmeester, and H. H. Burdsall, Jr.

Molecular Evolution

- 821-840 Phylogenetic relationships in auriculariaceous basidiomycetes based on 25S ribosomal DNA sequences
M. E. Berres, L. J. Szabo, and D. J. McLaughlin

Physiology/Biochemistry

- 841-845 Lichen metabolites inhibit cell wall-degrading enzymes produced by the lichen parasite *Nectria parmeliae*
A. P. Torzilli and J. D. Lawrey
- 846-856 Effect of extracts of *Pyrenopeziza brassicae* on the reproductive development of other species of fungi
M. Chamberlain, S. Ertz, and D. S. Ingram
- 857-863 Melanin and perithecial development in *Ophiostoma piliferum*
W. C. Zimmerman, R. A. Blanchette, T. A. Burnes, and R. L. Farrell
- 864-875 Nitrogen metabolism of *Leucostoma persoonii* and *L. cincta* in virulent and hypovirulent isolates
C. J. P. Jensen and G. C. Adams

Systematics

- 876-879 *Boerlagiomyces websteri*, a new ascomycete from fresh water
C. A. Shearer and J. L. Crane

- 880–885 *Omphalina sensu lato* in North America 4: *O. rosella*
S. A. Redhead, G. R. Walker, J. F. Ammirati, and L. L. Norvell
- 886–890 Two new genera of corticioid basidiomycetes with gloeocystidia and amyloid basidiospores
S.-H. Wu
- 891–895 *Pareutypella* gen. nov. for two long-ostiolate pyrenomycetes from Taiwan
Y.-M. Ju and J. D. Rogers
- 896–901 A new species of *Pythium* producing multiple oospores isolated from bentgrass in North Carolina
G. Abad, H. D. Shew, L. F. Grand, and L. T. Lucas
- 902–908 *Knufia cryptophialidica* gen. et sp. nov., a dematiaceous hyphomycete isolated from black galls of trembling aspen (*Populus tremuloides*)
L. J. Hutchison, W. A. Untereiner, and Y. Hiratsuka
- 909–921 Unusual reticulated parenthosomes surround the dolipore of a hyphomycete with clamp connections, *Ditangifibulae dikaryotae* gen. et sp. nov.
G. C. Adams, K. L. Klomparens, and P. E. Hennon
- 922 *Kirkomyces*, a new name for *Kirkia* Benny
G. L. Benny

Memorial

- 923–924 Francis A. Uecker, 1930–1995
J. D. Rogers

Notice

925

Index

926

PUBLICATION DATES

Issues for Volume 86, 1994, were published on the dates indicated.

86(1): 6 April 1994

86(2): 12 May 1994

86(3): 21 July 1994

86(4): 20 September 1994

86(5): 3 November 1994

86(6): 25 January 1995